

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows. This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Cancelled)

2. (Currently Amended) A computer-implemented method, according to claim ~~[[1]]~~3, wherein writes to the group begun after initiating the cycle switch do not complete until after the cycle switch has completed.

3. (Currently Amended) A computer-implemented method of ordering data writes, ~~according to claim 1, further~~ comprising:

at least some of a group of primary storage devices receiving a first plurality of data writes;

initiating a cycle switch that causes a change to a new cycle for the group of primary storage devices, wherein the first plurality of data writes are associated with a particular cycle on each primary storage device in the group;

at least some of the group of primary storage devices receiving a second plurality of writes after initiating the cycle switch wherein all of the second plurality of writes are associated with a cycle different from the particular cycle on each primary storage device; and

after completion of the cycle switch, each of the primary storage devices of the group initiating transfer of the first plurality of writes to a corresponding secondary storage device.

4. (Currently Amended) A computer-implemented method, according to claim 3, further comprising:

following each of the primary storage devices of the group completing transfer of the first plurality of writes to a corresponding secondary storage device, each of the primary storage devices sending a message to the corresponding secondary storage device.

5. (Currently Amended) A computer-implemented method, according to claim [[1]]3, further comprising:

providing the first plurality of data writes to cache slots of the group of primary storage device.

6. (Currently Amended) A computer-implemented method, according to claim [[1]]3, wherein receiving a first plurality of data writes includes receiving a plurality of data writes from a host.

7. (Currently Amended) A computer-implemented method, according to claim [[1]]3, wherein a host ~~causes~~ initiates the cycle switch.

8. (Currently Amended) A computer-implemented method, according to claim ~~[[1]]~~ 3, wherein ~~causing~~ initiating the cycle switch includes:

waiting a predetermined amount of time;

determining if all of the primary storage devices of the group of storage devices is ready to switch; and

for each of the primary storage devices of the group, sending a first command thereto to cause a cycle switch.

9. (Currently Amended) A computer-implemented method, according to claim 8, wherein sending a command to ~~cause~~ initiate a cycle switch also causes writes begun after the first command to not complete until a second command is received.

10. (Currently Amended) A computer-implemented method, according to claim 9, further comprising:

after sending the first command to all of the primary storage devices of the group, sending the second command to all of the primary storage devices to allow writes to complete.

11. (Cancelled)

12. (Currently Amended) Computer software in a computer-readable medium, according to claim ~~[[11]]~~ 13, wherein writes to the group begun after initiating the cycle switch do not complete until after the cycle switch has completed.

13. (Currently Amended) Computer software in a computer-readable medium, according to ~~claim 11~~, further comprising:

executable code that initiates a cycle switch that causes a change to a new cycle for the group of primary storage devices wherein the first plurality of data writes are associated with a particular cycle on each primary storage device in the group;

executable code that, for a second plurality of writes provided after initiating the cycle switch, associates all of the second plurality of writes with a cycle different from the particular cycle on each primary storage device;

executable code that causes each of the primary storage devices of the group to initiate transfer of the first plurality of writes to a corresponding secondary storage device after completion of the cycle switch.

14. (Currently Amended) Computer software in a computer-readable medium, according to claim 13, further comprising:

executable code that causes each of the primary storage devices to send a message to the corresponding secondary storage device following each of the primary storage devices of the group completing transfer of the first plurality of writes to a corresponding secondary storage device.

15. (Currently Amended) Computer software in a computer-readable medium, according to claim ~~[[11]]~~13, further comprising:

executable code that provides the first plurality of data writes to cache slots of the group of primary storage device.

16. (Currently Amended) Computer software in a computer-readable medium, according to claim [[11]] 13, wherein the first plurality of data writes are from a host.

17. (Currently Amended) Computer software in a computer-readable medium, according to claim [[11]] 13, wherein a host runs executable code that ~~causes~~ initiates the cycle switch.

18. (Currently Amended) Computer software in a computer-readable medium, according to claim [[11]] 13, wherein executable code that ~~causes~~ initiates the cycle switch includes:

executable code that waits a predetermined amount of time;

executable code that determines if all of the primary storage devices of the group of storage devices is ready to switch; and

executable code that sends a first command to each of the primary storage devices of the group to cause a cycle switch.

19. (Currently Amended) Computer software in a computer-readable medium, according to claim 18, wherein executable code that sends a command to ~~cause~~ initiate a cycle switch also causes writes begun after the first command to not complete until a second command is received.

20. (Currently Amended) Computer software in a computer-readable medium, according to claim 19, further comprising:

executable code that sends the second command to all of the primary storage devices to allow writes to complete after sending the first command to all of the primary storage devices of the group.

21. (New) A data storage device, comprising:

a plurality of disk drives;

a plurality of disk adapters coupled to the disk drives;

a volatile first memory coupled to the plurality of disk adapters;

a plurality of host adapters, coupled to the disk adapters and the first memory that communicate with host computers to send and receive data to and from the disk drives; and
at least one remote communications adapter that communicates with other storage devices, wherein at least one of the disk adapters, host adapters, and the at least one remote communications adapter includes an operating system that performs the steps of:

receiving a first plurality of data writes that correspond to data other data writes received by other related storage devices;

receiving a signal that causes a change to a new cycle, wherein the first plurality of data writes are associated with a particular cycle;

receiving a second plurality of writes after the cycle switch wherein all of the second plurality of writes are associated with a cycle different from the particular cycle; and

after completion of the cycle switch, initiating transfer of the first plurality of writes to a corresponding secondary storage device.

22. (New) A data storage device, according to claim 21, wherein writes begun after initiating the cycle switch do not complete until after the cycle switch has completed.